H.A

Notice of Allowability	Application No.	Applicant(s)	
	10/644,372	BUFFET ET AL.	
	Examiner	Art Unit	
	Luan Thai	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the appeal brief filed 9/22/05 and the interview on 12/08/05*.

2. ☒ The allowed claim(s) is/are *1, 5-7, 15, 17-18 and 22-23 (renumbered as 1-9, respectively)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 12/8/05
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Luan Thai

LUAN THAI
PRIMARY EXAMINER

12/8/05

EXAMINER'S AMENDMENT

This Office action is responsive to the Appeal Brief filed on 9/22/05 and the interview with applicant's attorney, Mr. Kelvin M. Vivian, December 8, 2005.

Claims 2-4, 8-14, 16, and 19-21 have been canceled (amendment filed 7/05/05).

Claims 1, 5-7, 15, 17-18 and 22-23 are pending in the application.

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with applicant's attorney, Mr. Kelvin M. Vivian, December 8, 2005.

3. Claims are amended as follows:

1. (Amended) A multi-layer semiconductor chip package, comprising:

a plurality of pairs of conductors for carrying a plurality of signals in a layer of a carrier of the package, the plurality of pairs of conductors including a first pair of conductors to carry aggressor signals and a second pair of conductors adjacent to the first pair of conductors, the second pair of conductors to carry victim signals affected by the aggressor signals;

wherein each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly such that each aggressor signal of the first pair of

conductors is respectively equidistant to both the victim signals of the second pair of conductors and each victim signal of the second pair of conductor is respectively equidistant to both the aggressor signals of the first pair of conductors,

wherein cross-talk between the adjacent pairs of conductors is substantially minimized without increasing a size of the package.

2. - 4. (canceled)

5. (previously presented) The package of claim 1, wherein the adjacent pairs of conductors are positioned orthogonally to each other.

6. (previously presented) The package of claim 1, wherein the adjacent pairs of conductors are positioned to be equidistant to each other.

7. (original) The package of claim 1, wherein the layer is near an interface between the carrier and a chip.

8. - 14. (canceled)

15. (Amended) A connector capable of being coupled to a semiconductor chip package, comprising:

a plurality of pairs of conductors for carrying a plurality of signals in a layer of a carrier of the package, the plurality of pairs of conductors including a first pair of conductors to carry aggressor signals and a second pair of conductors adjacent to the first

pair of conductors, the second pair of conductors to carry victim signals affected by the aggressor signals;

wherein each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly such that each aggressor signal of the first pair of conductors is respectively equidistant to both the victim signals of the second pair of conductors and each victim signal of the second pair of conductor is respectively equidistant to both the aggressor signals of the first pair of conductors,

wherein cross-talk between the adjacent pairs of conductors is substantially minimized without increasing a size of the package.

16. (canceled)

17. (previously presented) The package of claim 15, wherein the adjacent pairs of conductors are positioned to be equidistant to each other.

18. (Amended) A method for providing a semiconductor chip package, comprising the steps of:

providing a plurality of pairs of conductors for carrying a plurality of signals in a layer of a carrier of the package, the plurality of pairs of conductors including a first pair of conductors to carry aggressor signals and a second pair of conductors adjacent to the first pair of conductors, the second pair of conductors to carry victim signals affected by the aggressor signals;

wherein each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly such that each aggressor signal of the first pair of conductors is respectively equidistant to both the victim signals of the second pair of conductors and each victim signal of the second pair of conductor is respectively equidistant to both the aggressor signals of the first pair of conductors,

wherein cross-talk between the adjacent pairs of conductors is substantially minimized without increasing a size of the package.

19. - 21. (canceled)

22. (previously presented) The method of claim 18, wherein the adjacent pairs of conductors are positioned to be equidistant to each other.

23. (original) The method of claim 18, wherein the layer is near an interface between the carrier and a chip.

4. Claims 1, 5-7, 15, 17-18 and 22-23 are allowed and renumbered as 1-9, respectively.

5. The following is an examiner's statement of reasons for allowance: the cited arts fail to teach or render obvious, among others, at least: "*the plurality of pairs of conductors including a first pair of conductors to carry aggressor signals and a second pair of conductors adjacent to the first pair of conductors, the second pair of conductors to carry victim signals affected by the aggressor signals; wherein each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly such that each aggressor signal of the first pair of*

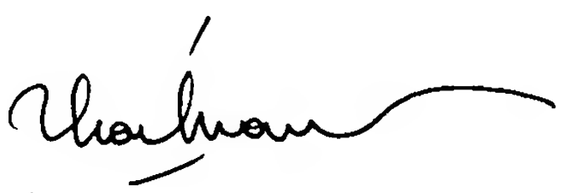
conductors is respectively equidistant to both the victim signals of the second pair of conductors and each victim signal of the second pair of conductor is respectively equidistant to both the aggressor signals of the first pair of conductors", as recited in claims 1, 15, and 18.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is 571-272-1935. The examiner can normally be reached on 6:30 AM - 5:00 PM, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley W. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Luan Thai
Primary Examiner
Art Unit 2891
December 8, 2005